



west virginia department of environmental protection

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Jim Justice, Governor
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BACKGROUND INFORMATION

Application No.:	R13-3349A
Plant ID No.:	103-00104
Applicant:	Ascent Resources-Marcellus, LLC
Facility Name:	Mary Miller
Location:	Four Mile Rd, Wileyville, WV
NAICS Code:	211111
Application Type:	Administrative Update
Received Date:	May 11, 2017
Engineer Assigned:	Jonathan Carney
Fee Amount:	\$1,300.00
Date Received:	May 11, 2017
Complete Date:	June 9, 2017
Due Date:	August 2, 2017
Applicant Ad Date:	May 17, 2017
Newspaper:	Wetzel Chronicle
UTM's:	Easting: 533.15 km Northing: 4,385.09 km Zone: 17
Description:	Removing one (1) 47 hp HiPower PSI/GM 3.0L natural gas-fired generator and installing one (1) 189 hp WSG-1068 6.8 L natural gas-fired generator.

DESCRIPTION OF PROCESS

The following description is from the application having the application number 13-3349A:

Natural gas, condensate, and produced water flow from the four (4) wellheads located on the Mary Miller facility. The inlet streams are first routed through the four (4) 1.5 million British thermal units per hour (MMBtu/hr) gas production units (GPUs) (E001 to 004) where the first stage of fluid separation occurs. The GPUs separate the well stream flow into a high pressure natural gas sales stream and condensate liquid stream. In the second stage of separation, the liquid streams are routed through five (5) 1.5 MMBtu/hr line heaters (E005-E008, E023) to aid in the downstream separation process.

The fluids are then routed to the 1.0 MMBtu/hr low pressure flash separator (E009) where condensate and produced water are separated. The flash from the low pressure separator is sent to the storage tanks, which are controlled by an enclosed combustor (E019). Produced water from the flash separator is routed to three (3) 400-bbl produced water storage tanks (E014-E016). The condensate from the flash separator is typically routed to the three (3) 400-bbl condensate storage tanks (E011 to E013).

The natural gas stream will exit the facility for transmission via pipeline. Condensate and produced water are transported offsite via tank truck (E20 and E21). Flashing, working, and breathing, emissions from the three (3) 400-bbl produced water storage tanks and three (3) 400-bbl condensate storage tanks will be routed to the enclosed combustion device (E019).

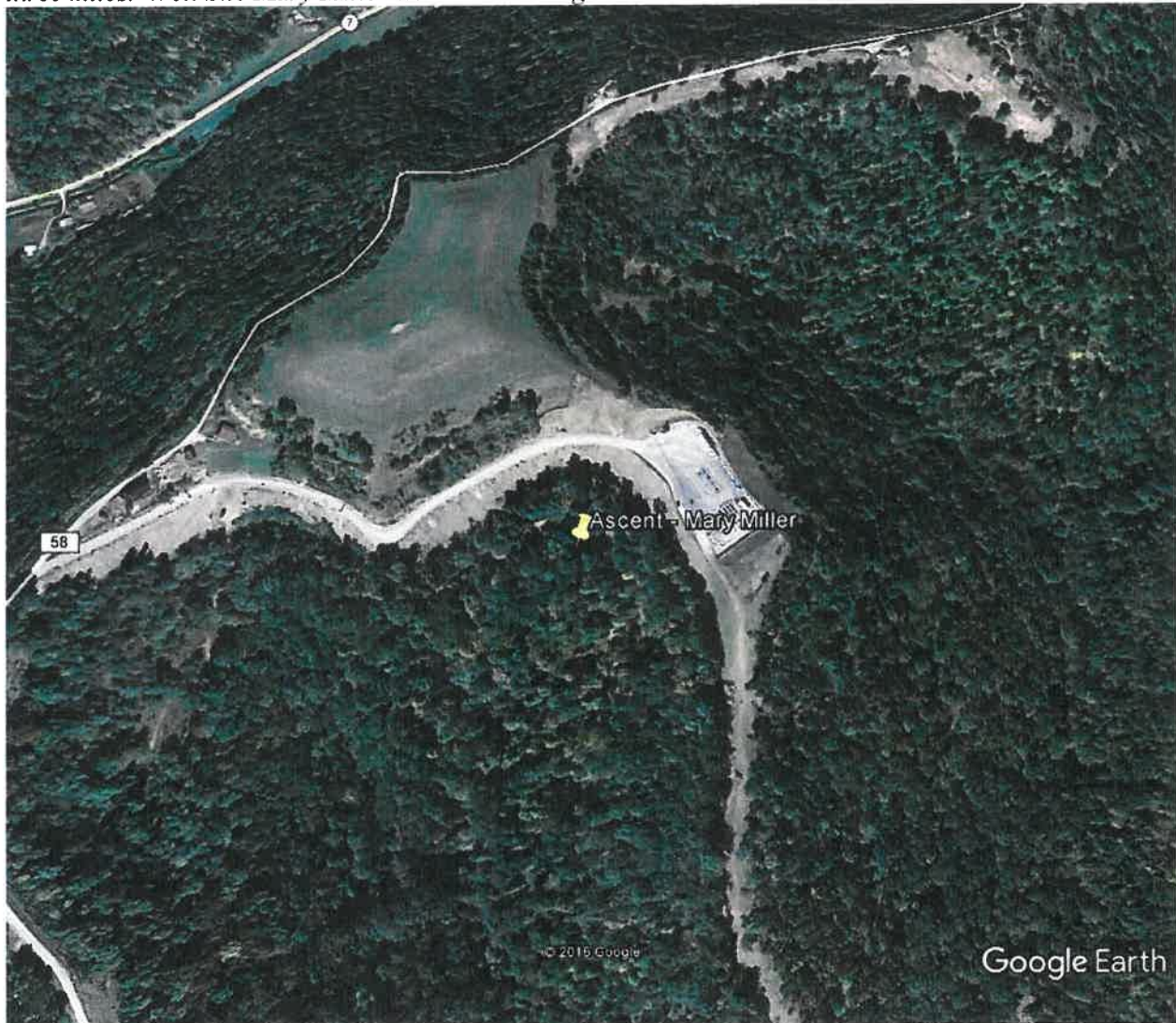
One (1) 189 hp WSG-1068 6.8L natural gas generator (E022A) is located on-site for facility electrical generation. The site also has a gas buster tank (E024) on-site to collect sand and other solids during blowdown from production equipment.

SITE INSPECTION

The following site inspection information is from the previous GP70-A156A evaluation:

A site inspection was conducted on May 27, 2015 by James Robertson of the enforcement section. *"The site was under active drilling at the time of my visit but it did not appear that any permitted equipment had been installed. The pad is located in a remote location on top of a hill. There is one house near the entrance to the pad but it is well over 300' away from the pad itself. I did not see any other houses that would be within 300' of the pad."*

From Route 7 East out of New Martinsville towards Morgantown for 17 miles. Turn left onto Barker Run Road and continue for 1.2 miles, before taking a left onto Hoyt Ridge Road. Follow Hoyt Ridge Road for three miles. Well Site Mary Miller will be on the right.



ESTIMATE OF EMISSIONS BY APPLICANT REVIEWED BY ENGINEER

Emissions associated with this application consist of the combustion emissions from one (1)

Emission Point ID#	Process Equipment	Calculation Methodology
S022A	189 hp WSG-1068 6.8L Generator	Manufacturer's Data, EPA AP-42 Emission Factors/40 CFR 60 Subpart JJJJ

Maximum detailed controlled point source emissions were calculated by Ascent Resources – Marcellus, LLC and checked for accuracy by the writer and are summarized in the table on the next page.

Emission Point ID#	Emission Point ID#	Emission Unit Description	Pollutant	Maximum Controlled Emission Rate	
				lb/hr	tpy
S022A	E022A	WSG-1068 6.8L 189 hp Generator	Nitrogen Oxides	0.42	1.83
			Carbon Monoxide	0.83	3.65
			Particulate Matter - 10	0.01	0.04
			Volatiles Organic Compounds	0.29	1.28
			Total HAPs	0.02	0.07
			Carbon Dioxide Equivalent	-	248

The total facility PTE (including fugitives) for the Mary Miller facility is shown in the following table:

Pollutant	PTE facility	PTE Change (tons/year)
Nitrogen Oxides	13.51	0.56
Carbon Monoxide	38.72	1.47
Volatile Organic Compounds	29.34	1.23
Particulate Matter-10/2.5	0.52	0.01
Total HAPs	1.00	0.00
Carbon Dioxide Equivalent	21,379	37

REGULATORY APPLICABILITY

The proposed modifications to the existing Mary Miller facility are subject to the following substantive state and federal air quality rules:

45CSR13 (Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation)

A 45CSR13 administrative amendment applies to this source due to the fact that Ascent Resources – Marcellus, LLC changes result in changes in emission points that result in an increase of regulated air pollutant.

Ascent Resources – Marcellus, LLC paid the appropriate application fee and published the required legal advertisement for a modification permit application.

45CSR16 (Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60)

45CSR16 applies to this source by reference of 40CFR60 Subpart JJJJ.

40CFR60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines)

Subpart JJJJ sets forth nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compound (VOC) emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject internal combustion engine. The 189 hp WSG-1068 6.8L Generator has an EPA certified engine. Maintenance and operation of this engine generator according to manufacturer instructions is required for this engine to continue to remain certified.

40CFR63 Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines)

Subpart ZZZZ establishes national emission limitations and operating limitations for HAPs emitted from stationary RICE located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations. The engine (S022A) at the Mary Miller well pad is subject to the area source requirements for non-emergency spark ignition engines.

The applicability requirements for new stationary RICEs located at an area source of HAPs, is the requirement to meet the standards of 40CFR60 Subpart JJJJ. These requirements were outlined above. The proposed engine meets these standards.

45CSR30 (Requirements for Operating Permits) – (NON-APPLICABILITY)

Ascent Resources – Marcellus, LLC is not subject to 45CSR30. The Mary Miller well pad is subject to 40CFR60 Subparts JJJJ and OOOO, however they are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided they are not required to obtain a permit for a reason other than their status as an area source.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

There will be small amounts of various non-criteria regulated pollutants emitted from the combustion of natural gas. However, due to the concentrations emitted, detailed toxicological information is not included in this evaluation.

AIR QUALITY IMPACT ANALYSIS

Since this is an administrative update to an existing non-major source (as defined in 45 CSR 14) no modeling was performed.

MONITORING OF OPERATIONS

No monitoring above that which is already required in R13-3349 is deemed necessary.

CHANGES FROM PERMIT R13-3349 TO PERMIT R13-3349A

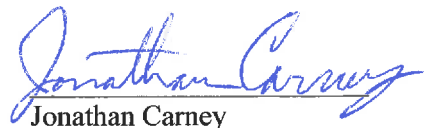
Permit Changes:

All reference to the HiPower PSI/GM 3.0L generator were removed from the permit.

The WSG-1068 6.8L Generator has been included in the permit emission unit table and emission limits for the new generator have been included in the permit.

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates Ascent Resources – Marcellus, LLC Mary Miller well pad should meet all the requirements of applicable regulations. Therefore, impact on the surrounding area should be minimized and it is recommended that the Wetzel County location should be granted a 45CSR13 modification permit for their facility.


Jonathan Carney
Permit Writer

June 16, 2017

DATE

Fact Sheet R13 – 3349A
Ascent Resources – Marcellus, LLC
Mary Miller